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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/976,788 | 10/12/2001 | Peter Baeuerle | 10744/7600 | 2206 |

26646 7590 10/09/2003

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| EXAMINER | |
|---|---|
| BROADHEAD, BRIAN J | |
| ART UNIT | PAPER NUMBER |
| 3661 | |

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/976,788 | BAEUERLE, PETER | |
| | Examiner | Art Unit | |
| | Brian J. Broadhead | 3661 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *21 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 through 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Cowan et al., 5029087.

3. As per claims 1, 11, 16, and 26, Cowan et al. disclose the slip of the torque converter is adjusted using a setpoint value, while the torque-converter lockup clutch is being closed, the setpoint value being continuously selected inside a closing interval, as a function of time, and taking into account the input torque applied to the torque converter on lines 30-38, on column 4, in figures 5 and 6, and on lines 11-31, on column 13.

4. As per claims 2 and 17, Cowan et al. disclose for the time-dependence of the setpoint value, a pre-selected time characteristic is taken into account, which converts the slip existing at the beginning of the closing interval as the initial value, into a target value, within the closing interval on lines 37-65, on column 14, and in figure 6A.

5. As per claims 3 and 18, Cowan et al. disclose a linear transition from the initial value to the target value is provided as a time characteristic inside the closing interval in Figure 6A.

6. As per claims 4 and 19, Cowan et al. disclose the input torque applied to the torque converter is monitored inside the closing interval, in response to the input torque changing by more than a specifiable tolerance deviation, the slip of the torque converter being ascertained and taken as a basis for a new initial value, which would appear at this input torque in the case of a completely open torque-converter lockup clutch on lines 5-11, on column 4.

7. As per claims 5 and 20, Cowan et al. disclose the value resulting from the preselected time characteristic for the current time inside the closing interval is selected as the setpoint value for the slip, the time characteristic converting the initial value ascertained using the currently applied torque into the target value on lines 1-40-, on column 13.

8. As per claims 6, 7, 21, and 22, Cowan et al. disclose the slip to be used as a new initial value, as a basis for the applied input torque is determined using a stored characteristic map in figure 9.

9. As per claims 8, 12, 23, and 27 Cowan et al. disclose in order to adjust the slip, a controlled parameter is provided for setting a clamping pressure for the torque converter on lines 38-45, on column 6.

10. As per claims 9 and 24, Cowan et al. disclose the time characteristic of the slip is monitored for a decline, in order to detect the start of power transmission in the torque converter lockup clutch on lines 2-5, on column 9.

11. As per claims 10 and 25, Cowan et al. disclose after a decrease in the slip detected, a clamping pressure for the torque converter is set as a function of a coupling

torque to be transmitted and a setpoint value for the slip of the torque converter lockup clutch on lines 52-57, on column 8.

12. As per claims 13, 14, 15, 28, 29 and 30, Cowan et al. disclose the control unit is connected to a data storage unit, in which a time characteristic for the setpoint value of slip is stored, a slip existing at the beginning of a closing interval as an initial value being converted into a target value within the closing interval, in accordance with the time characteristic for the setpoint value of the slip, and a slip value can be derived for each input torque, on lines 37-64, on column 14, and reference number 71 in figure 2A.

***Response to Arguments***

13. Applicant's arguments filed 7-14-03 have been fully considered but they are not persuasive. Applicant argues, "Nowhere do Cowan et al. disclose, or even suggest, a control unit that selects a setpoint value for the slip of the torque converter as a function of time and taking into consideration the input torque currently being applied to the torque converter", but the examiner does not agree with this. Cowan et al. disclose in figures 5 and 6, and on lines 11-31, on column 13, that a control loop that repeatedly determines a new target value 199(or setpoint value) of the slip of the converter. Cowan et al. also disclose that the input torque conditions of the converter are determined by the actual slip condition and the related engine conditions on line 67, on column 3, through line 11, on column 4. The applicant also argues that Cowan et al. does not disclose the setpoint value being continuously selected inside a closing interval, but that is exactly what Cowan et al. disclose. In each loop of the method in figure 5, a new value for the desired slip is calculated as is seen in 199 in figure 6.

***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

BJB
October 7, 2003

WILLIAM A. CUCHLINSKI, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600